

Abstract of the Disclosure

Weight saving of industrial engines. Making pollution-causing material harmless. Improvement in thermal efficiency and reduction of operating cost. Arrangement To produce compressed air, air is pressurized by a turbo charger or a super turbo charger and stored in an air tank. The air is fed, at an optimum temperature and a given pressure, to a cylinder liner shortened according to the pressure. Valves for taking in and out air are hydraulically driven for individual opening and closing according to a computer-aided optimum valve timing diagram. The engine is controlled under high-oxygen high-temperature lean burn condition, and a hydrocarbon is injected into an exhaust manifold to reduce peroxides, thus making pollution-causing material harmless. Effects Reduction of operating cost. Increase in carrying capacity due to the weight reduction of the vehicle body in the case of a vehicle-mounted engine.